

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-23 (Canceled)

24. (New) An information recording medium, comprising:
a first recording layer and a second recording layer in which record information can be alternately recorded,
at least one of said first recording layer and said second recording layer comprising: an anchor area which is to record therein anchor information which is referred to in reading file system information for controlling at least one of recording and reproduction of the record information; and an update area to update-record therein the anchor information.

25. (New) The information recording medium according to claim 24, wherein the update area is included in a user area to record therein the record information.

26. (New) The information recording medium according to claim 24, wherein the update area is included in a border management area to manage a border area which is a recording unit by which the record information is alternately recorded.

27. (New) The information recording medium according to claim 24, wherein at least one of said first recording layer and said second recording layer comprises a pointer recording area to record therein pointer information which indicates an address value of the update area in which the anchor information is update-recorded.

28. (New) The information recording medium according to claim 27, wherein the pointer recording area is included in a recording management area to manage the recording of the record information.

29. (New) The information recording medium according to claim 24, wherein at least one of said first recording layer and said second recording layer comprises a flag area to record therein an update flag which indicates whether or not the anchor information is update-recorded into the update area.

30. (New) The information recording medium according to claim 29, wherein the flag area is included in a border management area to manage a border area which is a recording unit by which the record information is alternately recorded.

31. (New) The information recording medium according to claim 24, further comprising a position information recording area to record therein position information which indicates a position of the anchor area.

32. (New) An information recording apparatus, comprising:
a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded;

a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; and

a second controlling device for controlling said recording device to update- record anchor information, which is recorded in anchor area as being a start point in reading file system information for controlling at least one of recording and reproduction of the record information and which is referred to in reading the file system information, into a recording area other than the anchor area of at least one of said first recording layer and said second recording layer as the record information.

33. (New) The information recording apparatus according to claim 32, wherein said second controlling device controls

said recording device to update-record the anchor information into at least one portion of a user data area to record therein the record information.

34. (New) The information recording apparatus according to claim 33, wherein said second controlling device controls said recording device to update-record the anchor information into the at least one portion of the user data area before closing a border area which is a recording unit by which the record information is alternately recorded.

35. (New) The information recording apparatus according to claim 32, wherein said second controlling device controls said recording device to update-record the anchor information into a border management area to manage a border area which is a recording unit by which the record information is alternately recorded.

36. (New) The information recording apparatus according to claim 35, wherein said second controlling device controls said recording device to update-record the anchor information into the border management area in closing the border area.

37. (New) The information recording apparatus according to claim 32, further comprising a third controlling device for controlling said recording device to record pointer information which indicates an address value of a recording area to which the anchor information is update-recorded.

38. (New) The information recording apparatus according to claim 37, wherein said third controlling device controls said recording device to record the pointer information into a recording management area to manage the recording of the record information.

39. (New) The information recording apparatus according to claim 37, wherein

said second controlling device controls said recording device to update-record the anchor information into a recording area which follows a recording area in which the record information is already recorded, in completing the recording of the record information, and

said information recording apparatus further comprises a judging device for judging whether or not the address value indicated by the pointer information is equal to an address value of a recording area in which the record information is lastly recorded.

40. (New) The information recording apparatus according to claim 32, further comprising a fourth controlling device for controlling said recording device to record an update flag which indicates whether or not the anchor information is update-recorded by said recording device.

41. (New) The information recording apparatus according to claim 40, wherein said fourth controlling device controls said recording device to record the update flag into a border management area to manage a border area which is a recording unit by which the record information is alternately recorded.

42. (New) An information recording apparatus,
comprising:

a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded;

a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer;

an anchor information recording device for recording anchor information which is referred to in reading file system

information for controlling at least one of recording and reproduction of the record information; and

an update-recording device for update-recording therein the anchor information.

43. (New) An information recording method in an information recording apparatus comprising: a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded,

said information recording method comprising:

a first controlling process of controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; and

a second controlling process of controlling said recording device to update-record anchor information, which is recorded into anchor area as being a start point in reading file system information for controlling at least one of recording and reproduction of the record information and which is referred to in reading the file system information, into a recording area other than the anchor area of at least one of said first recording layer and said second recording layer as the record information.

44. (New) An information reproducing apparatus for reproducing the record information recorded on said information recording medium by said information recording apparatus comprising: a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded; a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; and a second controlling device for controlling said recording device to update- record anchor information, which is recorded in anchor area as being a start point in reading file system information for controlling at least one of recording and reproduction of the record information and which is referred to in reading the file system information, into a recording area other than the anchor area of at least one of said first recording layer and said second recording layer as the record information,

said information reproducing apparatus comprising:

a first reading device for reading the anchor information which is recorded in the anchor area or which is update-recorded into the recording area other than the anchor area of at least one of said first recording layer and said second recording layer;

a second reading device for reading the file system information on the basis of the read anchor information; and

a reproducing device for reproducing the record information on the basis of the read file system information.

45. (New) An information reproducing apparatus for reproducing the record information recorded on said information recording medium by said information recording apparatus comprising: a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded; a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; an anchor information recording device for recording anchor information which is referred to in reading file system information for controlling at least one of recording and reproduction of the record information; and an update-recording device for update-recording therein the anchor information,

said information reproducing apparatus comprising:

a first reading device for reading the anchor information which is recorded in the anchor area or which is update-recorded into the recording area other than the anchor area of

at least one of said first recording layer and said second recording layer;

a second reading device for reading the file system information on the basis of the read anchor information; and

a reproducing device for reproducing the record information on the basis of the read file system information.

46. (New) An information reproducing apparatus for reproducing record information recorded on an information recording medium comprising: a first recording layer and a second recording layer in which record information can be alternately recorded, at least one of said first recording layer and said second recording layer comprising: an anchor area which is to record therein anchor information which is referred to in reading file system information for controlling at least one of recording and reproduction of the record information; and an update area to update-record therein the anchor information,

said information reproducing apparatus comprising:

a first reading device for reading anchor information which is recorded in the anchor area or the update area; and

a reproducing device for reproducing the record information on the basis of the read anchor information.

47. (New) An information reproducing method of reproducing the record information recorded on said information recording medium by said information recording apparatus comprising: a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded; a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; and a second controlling device for controlling said recording device to update- record anchor information, which is recorded in anchor area as being a start point in reading file system information for controlling at least one of recording and reproduction of the record information and which is referred to in reading the file system information, into a recording area other than the anchor area of at least one of said first recording layer and said second recording layer as the record information,

said information reproducing method comprising:

a first reading process of reading the anchor information which is recorded in the anchor area or which is update-recorded into the recording area other than the anchor area of at least one of said first recording layer and said second recording layer;

a second reading process of reading the file system information on the basis of the read anchor information; and
a reproducing process of reproducing the record information on the basis of the read file system information.

48. (New) An information reproducing method of reproducing the record information recorded on said information recording medium by said information recording apparatus comprising: a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded; a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; an anchor information recording device for recording anchor information which is referred to in reading file system information for controlling at least one of recording and reproduction of the record information; and an update-recording device for update-recording therein the anchor information,

said information reproducing method comprising:

a first reading process of reading the anchor information which is recorded in the anchor area or which is update-recorded into the recording area other than the anchor area of

at least one of said first recording layer and said second recording layer;

a second reading process of reading the file system information on the basis of the read anchor information; and

a reproducing process of reproducing the record information on the basis of the read file system information.

49. (New) A computer program product in a computer-readable medium for tangibly embodying a program of instructions_executable a computer provided for the information recording apparatus, said computer program making the computer function as at least one portion of first controlling device and second controlling device,

said information recording apparatus, comprising:

a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded;

said first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; and

said second controlling device for controlling said recording device to update- record anchor information, which is recorded in anchor area as being a start point in reading

file system information for controlling at least one of recording and reproduction of the record information and which is referred to in reading the file system information, into a recording area other than the anchor area of at least one of said first recording layer and said second recording layer as the record information.

50. (New) A computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided for the information recording apparatus, said computer program making the computer function as at least one portion of said first controlling device, said anchor information recording device and said update-recording device,

an information recording apparatus, comprising:

a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded;

said first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer;

said anchor information recording device for recording anchor information which is referred to in reading file system

information for controlling at least one of recording and reproduction of the record information; and

said update-recording device for update-recording therein the anchor information.

51. (New) A computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided for the information reproducing apparatus, said computer program making the computer function as at least one portion of first reading device, second reading device and reproducing device, said information reproducing apparatus for reproducing the record information recorded on said information recording medium by said information recording apparatus comprising: a recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded; a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; and a second controlling device for controlling said recording device to update- record anchor information, which is recorded in anchor area as being a start point in reading file system information for controlling at least one of recording and reproduction of the record

information and which is referred to in reading the file system information, into a recording area other than the anchor area of at least one of said first recording layer and said second recording layer as the record information,

said information reproducing apparatus comprising:

a first reading device for reading the anchor information which is recorded in the anchor area or which is update-recorded into the recording area other than the anchor area of at least one of said first recording layer and said second recording layer;

a second reading device for reading the file system information on the basis of the read anchor information; and

a reproducing device for reproducing the record information on the basis of the read file system information.

52. (New) A computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided for the information reproducing apparatus, said computer program making the computer function as at least one portion of a first reading device, a second reading device and a reproducing device,

said information reproducing apparatus for reproducing the record information recorded on said information recording medium by said information recording apparatus comprising: a

recording device for recording record information onto an information recording medium, comprising a first recording layer and a second recording layer in which the record information can be recorded; a first controlling device for controlling said recording device to record the record information alternately into said first recording layer and said second recording layer; an anchor information recording device for recording anchor information which is referred to in reading file system information for controlling at least one of recording and reproduction of the record information; and an update-recording device for update-recording therein the anchor information,

said information reproducing apparatus comprising:

a first reading device for reading the anchor information which is recorded in the anchor area or which is update-recorded into the recording area other than the anchor area of at least one of said first recording layer and said second recording layer;

a second reading device for reading the file system information on the basis of the read anchor information; and

a reproducing device for reproducing the record information on the basis of the read file system information.

53. (New) A computer program product in a computer-readable medium for tangibly embodying a program of

instructions executable by a computer provided for the information reproducing apparatus, said computer program making the computer function as at least one portion of said first reading device and said reproducing device,

information reproducing apparatus for reproducing record information recorded on an information recording medium comprising: a first recording layer and a second recording layer in which record information can be alternately recorded, at least one of said first recording layer and said second recording layer comprising: an anchor area which is to record therein anchor information which is referred to in reading file system information for controlling at least one of recording and reproduction of the record information; and an update area to update-record therein the anchor information,

said information reproducing apparatus comprising:

said first reading device for reading anchor information which is recorded in the anchor area or the update area; and

said reproducing device for reproducing the record information on the basis of the read anchor information.